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ABSTRACT

This paper critiques Aumaugher's argument which states that the traditional view of concepts as a class of things with common attributes is an insufficient one, and, instead, offers a counterview, stemming from the work of Wittgenstein, which says that a concept is a term's use in the language. Aumaugher states that concept-terms are not always, if ever, used to refer to a set of cases having a feature in common. But this is somewhat misleading, because there are many concepts which are classificatory in nature. Examples include tourist, cat, tax, and game. Aumaugher then goes on to say that Wittgenstein's work suggests that if we wish to teach a concept, we should not set out to look for a feature or set of features that is common to the concepts, but, instead, should examine examples of the concept (games, for example) and look for a network of overall similarities. While there is nothing wrong or harmful in using Aumaugher's teaching approach, it may leave students without a basic reference point to use when trying to identify concepts. Furthermore, there are many concepts which do not lend themselves to being defined through the identification of attributes-in-common. (RM)

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IS A CONCEPT A CLASS OF PARTICULARS HAVING ATTRIBUTES IN COMMON OR NOT?

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IS A CONCEPT A CLASS OF PARTICULARS HAVING ATTRIBUTES IN COMMON OR NOT?

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This paper grew out of a reaction to some conclusions reached by Aumaugér in a 1981 paper regarding the nature and teaching of concepts in the social studies.[1] Aumaugér's conclusions developed out of his observation that many social studies theorists hold the view that a concept is a class of particulars having a characteristic (or set of characteristics) in common. He quoted Beyer's 1971 text as an example to illustrate that the strategies such theorists recommend for teaching concepts is based on this view.[2] These strategies usually involved having students distinguish between examples and non-examples of a concept by looking for the characteristics which the examples share in common.

By examining a number of both elementary and secondary social studies methods texts, Stanley confirmed Aumaugér's observation that many social studies theorists do indeed view a concept as a class of things, and that the basic way advocated to go about teaching concepts is to help students (either inductively or deductively) grasp what are the key attributes a particular thing has in common with other members of its' class.[3] Recently published texts appear to bear out Stanley's findings.[4]

Aumaugér argued that this rather commonly accepted view of concepts (let us call it the "traditional" view) is an insufficient one, and that trying to get students to produce

[or identify] the attributes common to the instances of a concept is likely to be an unsuccessful strategy for teaching concepts. He instead offered a counterview, stemming from the work of Wittgenstein[5] as to what concepts are, and then presented a general discussion of what this counterview requires with regard to the teaching of concepts. In brief, his main points were the following:

- a concept is a term's use in the language;
- knowing a concept is knowing how to use the term that expresses the concept correctly in the language;
- that being able to use a term correctly is knowing:
  1) how to use the term grammatically;
  2) what speech acts the term can be used to perform;
  3) in what contexts the term can be used;
  4) the logically legitimate ways of operating with the utterances in which the term can occur;
  5) which behavior is involved in the use of the term and which is not;
  6) how the term is similar and different in the above uses from its' family of terms' uses.[6]

Aumauger went on to argue that teachers would be more successful in teaching concepts if they would concentrate on having students examine specific examples of the use of the term expressing the concept [the concept-label], rather than trying to get them to cite the attributes which particular instances of the concept have in common. In a more recent paper, he has

presented in more detail a specific six-step strategy for teaching concepts in this way.[7]

What I want to do in this paper is to take issue [at least in part] with this counterview. It is beyond the scope of this paper to deal with all of Aumauger's points as listed above, but I do wish to defend the traditional view to some extent.

Aumauger states that "concept-terms are not always [if ever] used to refer to a set of cases having a feature in common,"[8] basing this conclusion on Wittgenstein's statement that concepts "have no one thing in common which makes us use the same word for all, but that they are related to one another in many different ways" [italics in original].[9] Upon reflection, I think that this is somewhat misleading. It depends on the kind of concept under consideration. There are many concepts which are classificatory in nature, and thus which have one [or more] attributes shared by all members of the class to which the concept refers. For example, consider such concepts as "tourist," "cat," and "tax." Are not all tourists people who travel for pleasure, yet who live elsewhere than the place they are visiting at the moment? Do not all cats purr, have whiskers, elongated pupils, and triangular shaped ears? Are not all taxes compulsory payments to a government?

Let us discuss the concept of tax in more detail. The Dictionary of American Politics offers the following definition: "A tax is a compulsory payment made to a government for its support or for the regulation or promotion of certain social

purposes and levied according to law uniformly upon all taxpayers of a given class."[10] Thus a tax is a certain kind of payment (that is, taxes are a part of a larger class of things called payments). An important question, therefore, is how do taxes differ from other kinds of payments? We might use the following diagram to illustrate this concept:

Category	Attributes
Major category -- payments	1. payment made to government
Sub-category -- taxes	2. levied according to law
	3. levied uniformly upon all taxpayers of a given class
	4. purpose is to support government, or
	5. to regulate social purposes, or
	6. to promote social purposes.[11]

From this diagram, we can see that certain kinds of payments qualify as taxes while others do not. The additional amount of money we pay when we purchase certain products in some states is a tax (e.g., sales, liquor, cigarette taxes). That portion of our wages and salaries we must pay to our Federal and State governments each year is a tax (Federal and State income taxes). Other kinds of payments, however, are not taxes. Why aren't they? Because they do not possess all of the critical (essential) attributes of a tax. They may possess some of the attributes (e.g., fees are levied according to law), but they need to possess all of the essential attributes to qualify as the particular kind of payment we are talking about.

Or consider the concept of "game." Aumauger takes this concept from Wittgenstein as a primary example that any set of particulars to which a concept-label refers does not have a single attribute (or set of attributes) in common. Basing his argument on Wittgenstein's statement that certain phenomena do not have "one thing in common which makes us use the same word for all, . . . they are related to one another in many different ways,"[12] he suggests that there "is or are no essential feature or features, characteristic or characteristics, attribute or attributes" which members of a concept have in common. Instead, there are similarities, relationships, and a whole series of them at that."[13] He quotes from Wittgenstein as follows:

> Consider for example the proceedings that we call "games." I mean board-games, card-games, ball-games, Olympic games, and so on. What is common to them all? -- Don't say: "There must be something common, or they would not be called'games'" -- but look and see whether there is anything common to all. -- For if you look at them you will not see something that is common to all, but similarities,relationships, and a whole series of them at that. . . . Look for example at board-games, with their multifarious relationships. Now pass to card-games; here you find many correspondences with the first group, but many common features drop out, and others appear. When we pass next to ball-games, much that is common is retained, but much is lost. -- Are they all 'amusing'? Compare chess with noughts and crosses. Or is there always winning and losing, or competition between players? Think of patience. In ball-games there is winning and losing, but when a child throws his ball at the wall and catches it again, this feature has disappeared. Look at the parts played by skill and luck; and at the difference between skill in chess and skill in tennis. Think now of games like ring-a-ring-a-roses; here is the element of amusement, but how many other characteristic features have disappeared! And we can go through the many, many other groups of games in the same way; can see how similarities crop up and disappear.
>
> And the results of this examination is: we see a

> complicated network of similarities overlapping and crisscrossing; sometimes overall similarities, sometimes similarities of detail.[14]

I think that this statement needs to be qualified somewhat, if not rejected outright. Webster's New World Dictionary defines a game as "a) any form of play or way of playing, amusement, or recreation; [b] any specific amusement or sport involving competition under specific rules; [c] any test of skill, courage, or endurance." This states, rather clearly I think, that all games possess at least these three characteristics in common:

a) they are a form of play or way of playing; amusement; or recreation;

b) they involve competition under specific rules;

c) they are a test of skill, courage, or endurance.

Examination of one or more specific games bears this out. Consider the kinds of games which Wittgenstein mentions -- board games, card games, ball games, Olympic games. A close look at such games [e.g., Monopoly and chess; bridge and poker; baseball and soccer; skiing and throwing the hammer] reveals that these games do have characteristics in common, and these characteristics are those listed above, as taken from Webster's Dictionary.

It is certainly possible that some instances of a concept may possess attributes in common in addition to the essential defining attributes [e.g., many games are played indoors, many games are played by only two persons, many can be played alone, etc.]. Many, but not all, games have these additional characteristics in common. But the presence of such attributes is not essential to the concept. A game is still a game even if it does not

possess any of these additional attributes (or even if it varies in other attributes, such as the materials with which the game is played). Certain attributes, however, are critical -- they must be present for an activity to be called a game. They are essential to the idea which the concept label represents. The concept does not exist if any of these atatributes is missing. An activity is not a game if it is not, at least:

a) a form of play or playing;

b) a form of competition under specific rules;

c) a test of skill, courage, or endurance.

It is these characteristics which make up the essence of the concept of "game."

Aumauger then goes on to say that Wittgenstein's work suggests that if we wish to teach the concept of game, we "ought not set out looking for a feature (or set of features) that is common to all games. We ought, instead, to begin by examining a variety of things called "games" to see what features each has, to see how in each game these features are configured (i.e., which features are central aspects of the game and which are not), and most importantly to see whether the features of one game are, in fact, among the configurations of features that constitute other games. In doing this, we will begin to "see a network of similarities and overlapping and crisscrossing: sometimes overall similarities, sometimes similarities of detail."

Aumauger then suggests that this "network of similarities" is quite different from "a set of features in common." Under the "set of features in common" view for "game," A,B,C, and D would be considered games only if they all had some thing (or things) in common with one another that were the same. It is by virtue of this common attribute, or set of attributes, that we can apply the term "game" to A,B,C, and D. Under the "network of similarities" view of "game", however, A may have something in common with B, and B may have something in common with C, and C with D, etc., but there may be nothing which A and B and C and D all have in common together. Yet the concept "game" is not "what is common to all games, but instead -- at least in part -- is the network of similarities and differences among the various things called games."15

I see nothing wrong or harmful in doing as Aumauger suggests -- that is, in examining a variety of cases to see whether the features of one game are among the configurations of features that constitute other games. My concern is that if teachers encourage students to do this with certain concepts (those which are classificatory in nature) <u>without</u> getting them to look for common attributes as well, students (depending on their age, prior knowledge, and intellectual development) will have trouble deciding if a particular activity is a game or not, for they will have no basic reference point to use. This might -- or might not --be a bad thing. It depends on whether

the concept being taught does or does not have an attribute or set of attributes in common. If it does [and as I have shown, many do], it seems that it would be much simpler to use the traditional method [example/non-example comparison looking for the presence of common attributes] which most social studies methods textbooks recommend.

To know what a game is, a person must understand how games are different from other activities with which they might be confused. And to acquire such an understanding, he or she must, at the very least, understand that games possess certain essential attributes whereas other activities, even though they are in some cases quite similar to games, are lacking in one or more of these attributes.

This is not to say that there are not other things a teacher can do to broaden a student's understanding of a concept. And many of these things involve the sorts of activities Aumauger has suggested. These activities are especially important with concepts that are not classificatory in nature. Relational concepts, for example, are usually expressed quantitatively. Thus the concept of"population density" refers to the relationship between the number of people living in an area compared to the size of the area. The concept here is not the numerical quotient <u>per se</u>, but the insight into the relationship involved. What we are after is helping students to see the relationship -- to understand that if the number of people living in an area were to increase, the density of that area would increase; whereas if there are the same number of people

living in a larger area, the density of that area is less. Discussion of illustrative cases, as Aumauger suggests, is necessary if students are to grasp what such concepts mean.

Furthermore, there are many concepts which do not lend themselves to being defined through the identification of attributes-in-common. These are concepts whose attributes tend to be vague or ambiguous (e.g., "society"), or which cannot even be formulated, yet which often we use as a part of our everyday discourse (a concept such as "importance" is an example). They are very hard to define (although operational definitions are often helpful in this regard), yet sentences using such concepts or terms representing them do have meaning for us. Thus, when someone says "This is important!", we know we are expected to give it extra attention. For concepts like these, I think that Wittgenstein's and Aumauger's suggestions make sense.

But the first step in teaching classificatory concepts (of which "game" is an example) is for the teacher and/or the learner to try and define what are the essential -- the critical, defining -- attributes of the concept, so that there is a base point from which to work, and then to try and provide students with (or have them find) many examples which possess these characteristics, along with studying similar cases which do not possess them, all the time making sure that students are clear as to why the examples and the non-examples are what they are. Whether or not certain essential attributes exist for any given concept is an empirical question. As Wittgenstein suggests, we should not say "There must be something common, or they would not be called 'games' -- but look and see whether there

is anything common to all."[16] Thus when we "look and see" at the concept of "game," for example, it does appear that those things we call games do indeed have certain features in common. And it is these features, at a minimum, that students need to learn and teachers need to teach.

FOOTNOTES

1. Robert D. Aumaugher, "Wittgenstein, Concepts, and the Social Studies," paper presented at the annual meeting of the National Council for the Social Studies, Detroit, Michigan, November, 1981.

2. Barry K. Beyer, INQUIRY IN THE SOCIAL STUDIES CLASSROOM: A STRATEGY FOR TEACHING. Columbus, Ohio: Charles Merrill, 1971.

3. William B. Stanley, "Approaches to Teaching Concepts and Conceptualizing: An Analysis of Social Studies Methods Textbooks," paper presented at the annual meeting of the American Educational Research Association, New York City, March, 1982.

4. George W. Maxim, SOCIAL STUDIES AND THE ELEMENTARY SCHOOL CHILD, Columbus, Ohio: Charles Merrill, 1983.

5. Ludwig Wittgenstein, PHILOSOPHICAL INVESTIGATIONS, 3rd edit., New York: The Macmillan Co., 1958.

6. Aumaugher, op. cit.

7. Aumaugher, "Teaching Concepts: A Six-Step Approach Illustrated with the Concept of 'Family'", paper presented at the annual meeting of the National Council for the Social Studies, San Francisco, California, November, 1983.

8. Ibid., p. 3.

9. Wittgenstein, op. cit., p. 31e.

10. As quoted in Harry S. Broudy, et. al., DEMOCRACY AND EXCELLENCE IN AMERICAN SECONDARY EDUCATION, Chicago, Illinois, Rand McNally, 1964, p. 124.

11. Ibid.

12. Aumaugher, 1981, p. 4.

13. Ibid, p. 5.

14. Wittgenstein, op. cit., pp. 31e, 32e, passages 65, 66.

15. Aumaugher, 1981, p. 6.

16. Wittgenstein, op. cit.